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# 要素投入与我国城市经济增长

Factor Input and Urban Economic Growth in China

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## 论文摘要

建国以来尤其是改革开放以来我国城市经济获得了巨大的发展。但由于缺乏对各要素在我国城市经济增长过程中的作用机制与贡献度的研究,导致近年来我国各城市在制定政策促进经济增长时不能取得预期的良好效果。因此,对我国城市经济增长过程中各要素的供求机制、各要素间的作用机制以及在要素作用下城市经济增长机制的研究,对我国城市经济增长中各要素的贡献、要素利用效率的分析,有利于我国城市政府采取政策措施促进适合本城市经济增长的相关要素的集聚,进而通过要素投入的规模效益、集聚效益来促进我国城市经济的增长。

为此,本文第二章首先介绍了经济基础理论、投入产出模型、累积因果效应模型和凯恩斯乘数模型等城市经济增长理论模型,并认为缺少从要素角度对城市经济增长的探讨是这些城市经济增长模型的缺陷。新古典城市经济增长模型尽管是从要素的角度来研究城市经济增长,但它并没有将土地作为生产要素之一加以考虑。第三章在充分考虑相对于宏观经济增长而言城市经济增长中要素具有高度流动性的基础上,借用了小型开放经济模型来分析城市经济增长过程中的要素供求机制,并在增加了土地要素的柯布-道格拉斯生产函数框架下分析了各要素对城市经济增长的作用机制,最后据此建立了要素角度的城市经济增长机制模型,并以此模型为基础在第四章、第五章和第六章对 1984~2004 年我国城市经济增长状况进行了实证分析。首先在第四章采用永续盘存法估算了 35 个样本城市自 1978 年到 2004 年的资本存量数据,并处理得到了各城市的以 1978 年价格为基准的产出、历年的非农产业从业劳动力、城市建成区面积等数据。第五章则利用第四章得到的数据,首先通过面板数据分析测算了索洛方程中各要素的弹性系数,并通过将其与在超越对数生产函数模型下通过岭回归模型测算得到的弹性系数以及国际、国内学者相关实证研究的结果相对比来证实这一结果的可靠性。第六章则利用第五章测算得到的我国城市经济增长中各要素弹性系数来计算各城市经济增长中的要素贡献,同时利用第四章处理得到的产出、资本存量、非农产业从业劳动力和城市建成区面积等数据来分析要素效率,并简要分析了我国城市经济增长要素投入中存在的一些问题。最后第七章则根据第四~六章的分析结论,提出促进我国城市经济增长的政策目标应该是促进要素的集聚和提高要素的集聚效益,并重点就与城市经济增长密切相关的区位与区位创造、调整城市内部空

间结构、产业集聚、城市信息化和区域协作与城市群发展等对策措施进行了分析。

本文的主要观点有：（1）对我国城市经济增长的要素分析是必要的，而且土地是城市经济增长要素分析中不可或缺的。（2）要素的高度流动性会对城市经济增长带来重要的影响，因此要素在城市经济增长中有其独特的作用机制。（3）通过 C-D 生产函数模型从多个角度测算的结果表明我国城市经济增长的规模效应，各要素对我国城市经济增长的贡献中，资本大约 40~60%，劳动力 5~15%，土地 5~15%，技术进步 20~40%。（4）我国城市经济增长中劳动力和土地的利用效率提高趋势并不显著。尽管与国外的资本产出比相比我国城市经济增长中的资本产出比仍然偏低，但资本产出比的持续上升则表明资本利用效率可能存在不断下降的趋势。（5）为促进我国城市经济持续增长，应通过区位与区位创造、调整城市内部空间结构、区域协作和城市群发展、产业集聚和城市信息化等政策措施，以促进要素的集聚、协调各要素的贡献和提高要素的集聚效益为目标。

**关键词：**城市经济增长；要素贡献；要素效率



## **Abstract**

Great progress in urban economic growth had been achieved since the foundation of P.R. China, especially since the implementation of reform and open policy in 1978. But, as it still had not been known about the functional mechanism and contribution of factors to urban economic growth in China, effects of policy for enhancing urban economic growth are not so good as anticipated. In order to agglomerate factors suitable for a city to promote its economic growth, it is necessary for us to make clear the factors' supply-demand mechanism, functional mechanism between factors and urban economic growth model from view factor, and factor contribution to urban economic growth in China. Thus, urban economic growth in China can grow fast and steadily by achieving benefit of scale economy, benefit of agglomeration and benefit of regional harmonious development.

For sake of these purposes, the author firstly introduced classical urban economic growth theory and models in chapter 2, by which the author found that lack of factor input analysis is the common limitations of classical urban economic growth theory and models. Although it analyzes urban economic growth by view of factor input in neo-classical urban economic growth model, it ignored land, which is a very important factor in urban economic growth. Analyzing urban economic growth in China from view of factor is the main task of this paper.

As described in chapter 3, compare with factor between countries in international economic, factors between cities in a county have better fluidity. So, in chapter 3 the author analyzed the supply-demand mechanism of factors using the model of little-open economy, and then deeply explained the functional mechanism of urban economic growth from view of factor under the C-D production function with the variable of land except capital and labor, and finally established an urban economic growth model from view of factor. On the basis of the urban economic growth model founded in chapter 3, the author made some positive analysis aimed at urban economic growth in China in chapter 4 to chapter 6. In chapter 4, the author estimated 35 cities' capital stock using perpetual inventory approach, and also obtained data such as GDP in 1978 price index, labor and area of all sample cities. In chapter 5, using data obtained in chapter 4, elasticity coefficients of factors including capital,

labor and land in Solow equation are estimated by means of panel data analysis. Then it was Compared with what was estimated by means of ridge regression under the super-log production function with the same data obtained in chapter 4, and what was shown in related literatures research on China or foreign countries' economic growth, the author think it was reliable. In chapter 6, the author calculated factor contribution to urban economic growth in China using elasticity coefficients estimated in chapter 5. At the same time, factor efficiency and other problems about factor input in urban economic growth in China are also discussed in chapter 6. Finally in chapter 7, the author presented some countermeasures to advance urban economic growth in China. That is, aimed at enhancing factor agglomeration and improving factor efficiency of agglomeration, policies such as location and location creation, restructure inner space of cities, enhancing industry agglomeration, urban informationization, regional cooperation and urban cluster development should be pay more attention.

Main viewpoint of this paper including: (1) Factor analysis is necessary in analyzing urban economic growth in China, and land is an important factor input in urban economic growth. (2) High fluidity of factor will seriously affect urban economic growth. Thus, factors in urban economic growth have its special functional mechanisms. (3) Under the analytical framework of C-D production with land also as a variable, it revealed that there exists scale economy in urban economic growth in China, and capital contribute about 40~60% to urban economic growth, labor contribute about 5~15%, land contribute about 5~15%, and technology contribute about 20~40%. (4) Efficiency of labor and land in urban economic growth in China has no significant improvement. Efficiency of capital measured in ratio of capital/output decreased. (5) In order to advance urban economic growth in China, policies aimed at enhancing factor agglomeration and improving factor efficiency of agglomeration should be paid much attention. Those policies include, location and location creation, adjusting inner space structure of cities, enhancing industry agglomeration, urban informationization, regional cooperation and urban cluster development.

**Key Words:** Urban Economic Growth; Factor Input; Factor Efficiency

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